

ABSTRACT OF THE DISCLOSURE

An aqueous composition includes in dispersion an active hydrogen-functional resin and a uretdione compound. The uretdione compound is a crosslinker for the active hydrogen-functional resin. The uretdione compound does not release volatile by-products during the curing reaction, which reduces regulated emissions and increases the amount of coating solids weight converted to cured coating on the substrate. The aqueous dispersion coating may be made by combining a solid uretdione compound with a molten, water-dispersible resin, salting the water-dispersible resin if necessary, and dispersing the resin mixture in water. The molten, water-dispersible resin may have functionality reactive with the uretdione compound, or the coating composition may contain a further water-dispersible resin having functionality reactive with the uretdione compound. The coating composition of the invention is applied to a substrate and then cured to produce a cured coating layer on the substrate. In a particular embodiment, the coating composition of the invention is electrodepositable and is coated onto the substrate by electrodeposition.